

TWO NEW SPECIES OF THE FAMILY PHILODROMIDAE FROM CHINA (ARACHNIDA, ARANEAE)

YANG Zi Zhong^{1, 2}, ZHU Ming-Sheng^{1*}, SONG Da Xiang¹

1. College of Life Sciences, Hebei University, Baoding Hebei 071002, China

2. Department of Life Sciences and Chemistry, Dali College, Dali, Yunnan 671000, China

Abstract This paper deals with two new species of the family Philodromidae: *Philodromus digitatus* sp. nov. and *Tibellus cucurbitus* sp. nov. The types were collected from Yunnan Province, China, and are deposited in the College of Life Sciences, Hebei University.

Key words Arachida, Araneae, *Philodromus*, *Tibellus*, new species, China.

Philodromidae was established by Thorell in 1870. So far 512 species of 29 genera have been described in the world, and 34 species belonging to 3 genera have been reported from China (Platnick, 2004). On examining the spider collection from Yunnan Province, we came across two new species of the family belonging to the genera *Philodromus* and *Tibellus*, and named them as: *Philodromus digitatus* sp. nov. and *Tibellus cucurbitus* sp. nov. respectively. Type specimens are deposited in the College of Life Sciences, Hebei University. All measurements given are in millimeters.

Philodromus digitatus **sp. nov.** (Figs 1-5)

Male. Body length 3.27. Cephalothorax 1.43 long, 1.42 wide; abdomen 1.84 long, 1.12 wide. Carapace pyriform, brown. Cephalic groove and radial furrow visible; median furrow longitudinal, connected with its front white V-shaped spot. Anterior eye row strongly recurved and shorter than posterior row, posterior eye row recurved. AME= ALE= PME< PLE (0.06: 0.06: 0.06: 0.10); AME/ALE< PME/PLE< ALE/PLE< PME/PME (0.05: 0.10: 0.13: 0.15: 0.23). MOA front width 0.23, back width 0.35. Clypeus 0.16. Chelicerae brown, without lateral condyle. Promargin with two teeth, anterior tooth larger; retromargin without teeth. Maxilla brown, longer than wide. Labium triangle. Sternum heart-shaped, with a lot of brown spots at lateral margins. Legs brown, with some setae. Femora I - IV with 3 dorsal spines, 3 prolateral and retrolateral spines; patella with 1 prolateral and retrolateral spine; tibia with 2 dorsal spines, 3 prolateral and retrolateral

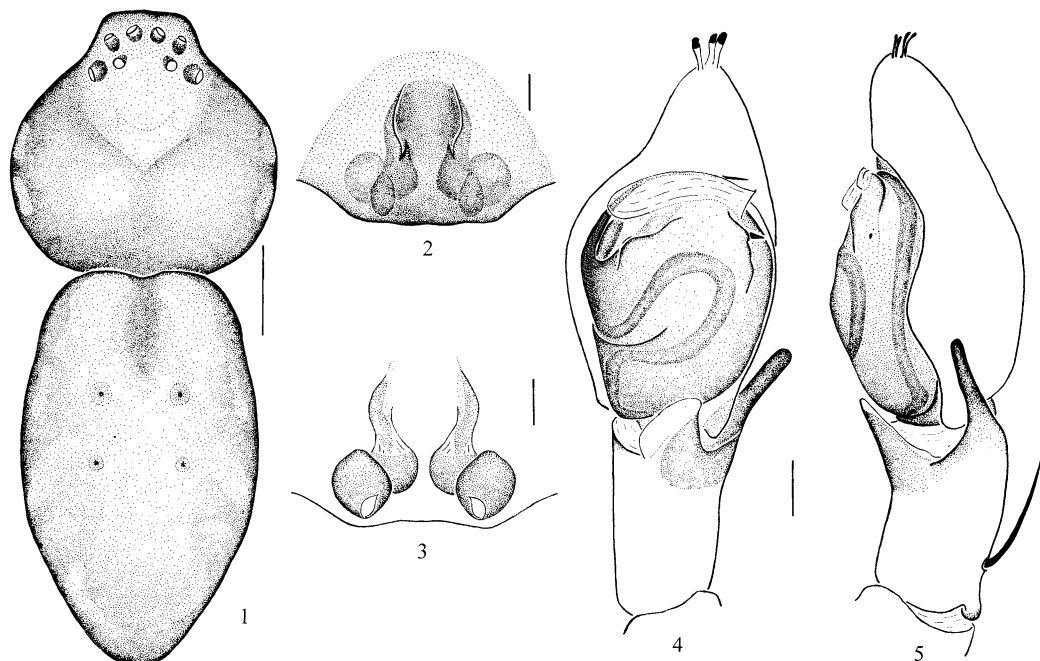
spines, 3 pairs of ventral spines; metatarsus with 1 dorsal spine, 3 prolateral and retrolateral spines, 3 pairs of ventral spines. Claws with clawtufts. Measurements of Legs: I 6.85 (1.90, 2.31, 1.65, 0.99); II 8.29 (2.28, 2.84, 2.01, 1.16); III 5.69 (1.73, 1.85, 1.32, 0.79); IV 5.75 (1.78, 1.85, 1.39, 0.73). Leg formula: 2143. Palpal tibia with two apophyses, the ventral apophysis wide and axe-shaped, the retrolateral one long and digitiform; distal end of the cymbium with 4 spatulate hairs; embolus thin and long, paraconductor bulbar apophysis short and denticle. Abdomen oval and brown, dorsum with many brown spots and 2 pairs of muscle impressions.

Female. Body length 4.45-5.05. A female of body length 5.05: cephalothorax 1.71 long, 1.80 wide; abdomen 3.34 long, 2.10 wide. AME= ALE= PME< PLE (0.06: 0.06: 0.06: 0.10); AME/ALE< PME/PLE< ALE/PLE< PME/PME (0.06: 0.16: 0.19: 0.21: 0.29). MOA front width 0.29, back width 0.42. Femur I - IV with 3 dorsal spines, femur I with 3 prolateral and retrolateral spines, II- IV with 1 prolateral and retrolateral spines; tibia I with 3 dorsal spines, 4 prolateral and retrolateral spines, 3 pairs of ventral spines, II with 2 dorsal spines, 3 prolateral and retrolateral spines, 3 pairs of ventral spines, III with 2 dorsal spines, 2 prolateral and retrolateral spines, 3 pairs of ventral spines, IV with 3 dorsal spines, 3 pairs of ventral spines; metatarsus I with 2 dorsal spines, 3 pairs of ventral spines, II with 1 dorsal spine, 2 prolateral and retrolateral spines, 3 pairs of ventral spines, III with 3 prolateral and retrolateral spines, 3 pairs of ventral spines, IV with 2 dorsal spines, 3 prolateral and retro

The project was supported by the Science Foundation of Yunnan Provincial Education Bureau (03Y649B).

* E-mail: mingshengzhu@263.net

Received 12 Sep. 2004, accepted 10 Oct. 2004.



Figs. 1-5. *Philodromus digitatus* sp. nov. 1. Male, dorsal view. 2. Epigynum. 3. Vulva. 4. Left male palp, ventral view. 5. Same, retrolateral view. Scale bars: 1 = 0.5 mm, 2-5 = 0.1 mm.

lateral spines, 3 pairs of ventral spines. Measurements of Legs: I 7.20 (2.10, 2.55, 1.58, 0.97); II 8.72 (2.52, 3.13, 1.94, 1.13); III 6.11 (1.97, 2.07, 1.32, 0.75); IV 6.43 (2.13, 2.10, 1.39, 0.81). Leg formula: 2143. Legs thicker and stronger than in male, other characters as male. Lateral margins of epigynum bracket shaped, copulatory ducts short and thick, spermatheca global.

Material. Holotype ♂, Fengyi Town (25°58' N, 99°52' E; Alt. 2050 m), Dali County, Yunnan Province, 14 Apr. 2002. Paratypes: 1 ♀, same data as holotype; 4 ♀ ♀, 1 ♂, same locality, 21 May 2001; 1 ♀, Hutiaoxia Town, Zhongdian County, 7 Aug. 2002; 1 ♂, Mt. Gaoligong, Gongshan County, 4 May 2004; 1 ♂, Mt. Diancang, Yangbi County, 7 June 2004, coll. YANG Zi Zhong.

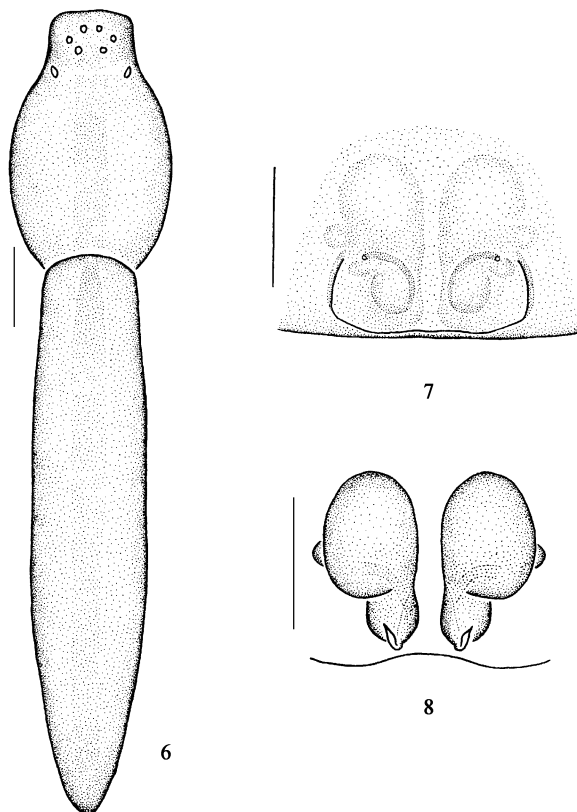
Diagnosis. The new species is closely related to *Philodromus pinyonelis* Schick, 1965, but can be distinguished from the latter by: 1) the ventral apophysis of the palpal tibia wide and axe-shaped, the retrolateral apophysis long and digitiform; 2) paraconductor bulbar apophysis short and denticle; 3) copulatory ducts short and thick, spermatheca oval.

Etymology. The specific name refers to the shape of retrolateral tibial apophysis of male palp.

Tibellus cucurbitus sp. nov. (Figs. 6-8)

Female. Holotype ♀, body length 9.94. Cephalothorax 3.06 long, 2.18 wide; abdomen 6.94 long, 1.49 wide. Carapace orange, with brown spots,

median longitudinal mark brownish. Cephalic groove, median furrow and radial furrow invisible. Eyes small, nearly equal in size; eye tubercle low. Anterior



Figs. 6-8. *Tibellus cucurbitus* sp. nov. 6. Female, dorsal view. 7. Epigynum. 8. Vulva. Scale bars: 6 = 1.0 mm, 7-8 = 0.2 mm.

eye row recurved, posterior eye row strongly recurved. AME= PME< ALE< PLE (0.08: 0.08: 0.10: 0.12); AME-AME= AME: ALE< PME: PME< ALE: PLE< PME: PLE (0.13: 0.13: 0.23: 0.33: 0.35). MOA front width 0.30, back width 0.38. Chelicerae orange, prolateral with 1 long spine shaped hair and some short spine shaped hairs. Maxilla and labium orange. Sternum orange, longer than wide. Legs orange, with brown short setae. Metatarsi and tarsi of legs I - IV with scopula composed of spatulate hairs. Claws with clawtufts. Femora I - IV each with 3 dorsal spines, I and II with 3 prolateral spines, I with 1 retrolateral spine, II with 2 retrolateral spines, III and IV with 1 prolateral spine; patellae I and II with 2 dorsal spines, III and IV with 1 dorsal spine; tibia I - IV with 1 dorsal spine, 3 prolateral and retrolateral spines, 4 pairs of ventral spines; metatarsi with 3 prolateral and retrolateral spines, 2 pairs of ventral spines. Legs measurement: I 12.54 (3.67, 4.79, 2.60, 1.48); II 14.84 (4.44, 5.51, 3.16, 1.73); III 7.69 (2.64, 2.75, 1.53, 0.77); IV 14.54 (4.85, 5.15, 3.16, 1.38). Leg formula: 2413. Two lateral margins of epigynum far apart from each other; the posterior margin of epigynum straight, spermathecae cucurbit-like, and spermathecal glands small. Abdomen long and narrow, orange in color, dorsal median mark brown, with short spine shaped hairs.

Material. Holotype 1 ♀, paratype 1 ♀, Xiangshan Park, Yun County (24°26' N, 100°07' E), Yunnan Province, 21 July 2003, coll. YANG Zi-Zhong.

Diagnosis. The new species is somewhat similar to

中国逍遥蛛科二新种记述 (蛛形纲, 蜘蛛目)

杨自忠^{1,2} 朱明生¹ 宋大祥¹

1. 河北大学生命科学学院 保定 071002

2. 云南大理学院生命科学与化学学院 大理 671000

摘要 记述中国逍遥蛛科二新种: 指状逍遥蛛 *Philodromus digitatus* sp. nov. 和葫芦长逍遥蛛 *Tibellus cucurbitus* sp. nov.。模式标本保存于河北大学博物馆。文中测量单位为: mm。

指状逍遥蛛 *Philodromus digitatus* sp. nov. (图1~5)

正模 ♂, 副模 1 ♀, 云南省大理市凤仪镇, 2002-04-14。副模 4 ♀, 1 ♂, 云南省大理市凤仪镇, 2001-05-21; 副模 1 ♀, 中甸县虎跳峡镇, 2002-08-07; 副模 1 ♂, 贡山县高黎贡山, 2004-05-04, 杨自忠采; 1 ♂, 漾濞县点苍山, 2004-06-07, 杨自忠采。

新种与 *Philodromus pinyonensis* Schick, 1965 近似, 但有以关键词 蜘蛛目, 逍遥蛛科, 逍遥蛛属, 长逍遥蛛属, 新种, 中国。

中图分类号 Q59.226

Tibellus tenellus (Koch, 1876) (Song & Zhu, 1997), but differs from the latter in: 1) the posterior margin of epigynum somewhat straight; 2) spermatheca like a converse cucurbit; 3) spermathecal glands small.

Etymology. The specific name refers to the shape of spermatheca.

REFERENCES

- Chen, H M, Zhang, J-X and Song, D X 2003. A newly recorded species of the family Philodromidae from China (Arachnida: Araneae). *Acta Arachnologica Sinica*, 12: 91-93.
- Dondale, C. D. and Redner, J. H. 1976. A review of the spider genus *Philodromus* in the Americas (Araneida: Philodromidae). *Can. Ent.*, 108: 127-157.
- Efimik, V. E. 1999. A review of the spider genus *Tibellus* Simon, 1875 of the East Palearctic (Aranei: Philodromidae). *Arthropoda Selecta*, 8: 103-124.
- Marisik, Y. M. 1991. Crab spiders of the family Philodromidae (Aranei) from east Siberia. *Zool. Zh.*, 70 (10): 48-58.
- Platnick, N. I. 2004. The World Spider Catalog, Version 4.5. American Museum of Natural History Web Document.
- Schick, R. X. 1965. The crab spiders of California (Araneae, Thomisidae). *Bulletin of the American Museum of Natural History*, 129: 39-66.
- Song, D X and Zhu, M S 1998. Fauna Sinica, Arachnida, Araneae, Thomisidae, Philodromidae. Science Press, Beijing. 178-214.
- Song, D X, Zhu, M S and Chen, J 1999. The Spiders of China. Hebei Science and Technology Publishing House, Shijiazhuang. 470-490.
- Yang, Z Z and Mao, B Y 2002. A new species of the genus *Philodromus* from China (Araneae: Philodromidae). *Acta Arachnologica Sinica*, 11: 77-79.
- Tikader, B. K. 1962. On some new species of spiders of the genus *Tibellus* (family Thomisidae) from India. *J. Univ. Poona (Sci. Tech.)*, 22: 133-137.
- Tikader, B. K. 1980. Thomisidae (Crab spiders). *Fauna India, Araneae*, 1: 181-222.

下区别: 触肢器胫节后侧突长, 指状, 腹突宽, 斧状; 副引导器生殖球突 (paraconductor bulbar apophysis) 短, 齿状; 交配管短粗, 纳精囊卵圆形。

词源: 新种的种名以雄性触肢器胫节后侧突的形状而拟定。

葫芦长逍遥蛛, 新种 *Tibellus cucurbitus* sp. nov. (图6~8)

正模 ♀, 副模 1 ♀, 云南省云县县城象山公园, 2003-07-21, 杨自忠采。

新种与娇长逍遥蛛 *Tibellus tendus* (Koch, 1876) 近似, 但有以下区别: 外雌器后缘平直, 纳精囊倒葫芦形, 纳精囊腺小。

词源: 新种的种名以纳精囊的形状拟定。